

WHAT IS CLAIMED IS:

- 1           1.       A liquid crystal display device comprising:  
2           a pair of substrates,  
3           a liquid crystal layer interposed between said pair of substrates,  
4           a wiring having a stacked structure layer formed on one of said pair of  
5           substrates,  
6           a transparent conductive film formed over said wiring,  
7           said wiring includes a first layer of aluminum or an alloy comprising  
8           essentially of aluminum, and at least a second layer of material selected from the  
9           group including of molybdenum, aluminum, chromium, tungsten, silver, and copper.
- 1           2.       The liquid crystal display device according to claim 1 wherein  
2           said second layer is formed on said first layer.
- 1           3.       The liquid crystal display device according to claim 1 wherein  
2           said transparent conductive film includes at least one of: ITO, IZO and IGO.
- 1           4.       The liquid crystal display device according to claim 1 further  
2           including a plurality of pixel parts being constructed with a plurality of gate lines and  
3           a plurality of drain lines arranged in a matrix on one of said pair of substrates, and a  
4           switching element being provided in each of said pixel parts,  
5           wherein one of said plurality of drain lines comprises said wiring.
- 1           5.       The liquid crystal display device according to claim 1 further  
2           including a plurality of pixel parts being constructed with a plurality of gate lines and  
3           a plurality of drain lines arranged in a matrix on one of said pair of substrates, and a  
4           switching element being provided in each of said pixel parts,  
5           wherein one of said plurality of gate lines comprises said wiring .
- 1           6.       The liquid crystal display device according to claim 5 wherein  
2           said plurality of gate lines are formed along a first direction in one of said pair of  
3           substrates, said plurality of drain lines formed along a second direction in one of said  
4           pair of substrates, a plurality of counter voltage signal lines formed along the first  
5           direction in one of said pair of substrates,

6                    wherein said one of plurality of counter voltage signal lines comprises  
7      said wiring.

1                    7.        The liquid crystal display device according to claim 6 further  
2      including a counter electrode disposed in said pixel part and connected with said one  
3      of plurality of counter voltage signal lines, said counter electrode having a rectilinear  
4      shape or a comb shape.

1                    9.        The liquid crystal display device according to claim 7 further  
2      including a comb-shape pixel electrode disposed in said pixel part and connected with  
3      said switching element.

1                    10.      The liquid crystal display device according to claim 9 further  
2      including an insulation layer, wherein said counter electrode is formed on one of said  
3      pair of electrodes, said insulating layer is formed over said counter electrode, said  
4      pixel electrode is formed on said insulating layer.

1                    11.      The liquid crystal display device according to claim 9 further  
2      including a scan signal applied through one of said plurality of gate lines to said  
3      switching element, a video signal is applied through one of said plurality of drain  
4      lines and said switching element to said pixel electrode, said switching element  
5      formed proximate to a crossing point between said one of said of drain lines and said  
6      one of said gate lines.

1                    12.      The liquid crystal display device according to claim 9 wherein  
2      said pixel electrode has a zigzag-shaped structure.

1                    13.      The liquid crystal display device according to claim 9 wherein  
2      said pixel electrode has a comb-shaped structure.

1                    14.      The liquid crystal display device according to claim 13 further  
2      including an insulation layer and an organic layer, wherein said counter electrode is  
3      formed on one of said pair of electrodes, said insulating layer is formed over said  
4      counter electrode, said organic layer is formed over said insulating layer, said pixel  
5      electrode is formed on said organic layer.

1                    15.      A liquid crystal display device comprising:

2 a pair of substrates,  
3 a liquid crystal layer interposed between said pair of substrates,  
4 drain lines and gate lines formed on one of said pair of substrates and  
5 crossing each other in a matrix form,  
6 counter voltage lines formed on one of said pair of substrates and being  
7 disposed between said gate lines,  
8 wherein at least one of said drain lines, said gate lines and said counter  
9 voltage lines includes a multi-layered structure covered with a transparent conductive  
10 film, said multi-layered structure comprising an aluminum layer or an alloy layer  
11 comprising essentially of aluminum and a high-melting point metal layer, said  
12 transparent conductive film including one of ITO, IZO and IGO.

1 16. The liquid crystal display device according to claim 15 further  
2 including a pixel electrode formed on one of said pair of substrates and having a  
3 comb-shaped structure, and a switching element formed proximate to a crossing point  
4 between said at least one of said drain lines and said gate lines and connected with  
5 said pixel electrode.

1 17. The liquid crystal display device according to claim 16 further  
2 including a sheet of counter electrode disposed on one of said pair of substrates in  
3 opposed relation to said pixel electrode and connected with one of said counter  
4 voltage lines.

1 18. The liquid crystal display device according to claim 16 further  
2 including a comb-shaped counter electrode disposed on one of said pair of substrates  
3 in opposed relation to said pixel electrode and connected with one of said counter  
4 voltage lines.

1 19. A liquid crystal display device comprising:  
2 a pair of substrates,  
3 a liquid crystal layer interposed therebetween,  
4 a thin film transistor having a gate electrode, a source electrode and a  
5 drain electrode formed on one of said pair of substrates;  
6 a gate line connected to said gate electrode,  
7 a drain line connected to said drain electrode,

8 a pixel electrode connected to said source electrode and having an  
9 approximately slit shape structure,  
10 a counter electrode being any of ITO, IZO or IGO and arranged in  
11 opposed relation to said pixel electrode,  
12 a counter voltage line connected to said counter electrode,  
13 wherein said counter voltage line comprising a triple-layered structure  
14 including an alumina first layer, a high-melting point metal second layer, and a third  
15 layer of aluminum or an alloy comprising essentially aluminum,  
16 said high-melting point metal second layer connected to said counter  
17 electrode through an opening in said alumina first layer.

1 20. The liquid crystal display device according to claim 19 wherein  
2 said alumina first layer and said high-melting point metal second layer are formed on  
3 said third layer, and  
4 said high-melting point metal second layer formed through said  
5 alumina layer from a surface side of a portion of said alumina layer to said third layer,  
6 and connected to said counter electrode.